

ABSTRACT OF THE DISCLOSURE

A conductive connection forming method includes forming a first layer comprising a first metal on a substrate and forming a second layer comprising a second metal different from the first metal on the first layer. At least a part of the first layer may be transformed to an alloy material comprising the first and second metals. A conductive connection may be formed to the alloy material. The alloy material may be less susceptible to formation of metal oxide compared to the first metal. By way of example, transforming the first layer may comprise annealing the first and second layer. An exemplary first metal comprises copper, and an exemplary second metal comprises aluminum, titanium, palladium, magnesium, or two or more such metals. The alloy material may be an intermetallic. A conductive connection may be formed to the alloy layer. An integrated circuit includes a semiconductive substrate, a layer comprising a first metal over the substrate, and a layer of alloy material within the first metal comprising layer. The alloy material layer may comprise the first metal and a second metal different from the first metal. The alloy material may be an intermetallic. A conductive connection may be formed on the alloy layer.